

Patent
Attorney Docket No.1TW7510.005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Deonarine, Victor I.

Serial No. : 09/682,780

Filed : October 18, 2001

For : **METHOD AND APPARATUS TO EXTEND AND
RETRACT A TEMPERATURE INDICATOR STICK**

Group Art No. : 3679

Examiner : Cottingham, J.

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CERTIFICATION UNDER 37 CFR 1.8(a) and 1.10

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APPEAL BRIEF PURSUANT TO 37 C.F.R. §§1.191 AND 1.192

Dear Sir:

This Appeal Brief is being filed in furtherance of the Notice of Appeal filed on August 16, 2004 and the Notice of Non-Compliant Appeal Brief mailed on January 11, 2005.

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1. REAL PARTY IN INTEREST

The real party in interest is Illinois Tool Works Inc., the Assignee of the above-referenced application by virtue of the Assignment to Illinois Tool Works Inc., recorded on January 9, 2002, recorded at reel 012461, frame 0169.

2. RELATED APPEALS AND INTERFERENCES

Appellant is unaware of any other appeals or interferences related to this Appeal. The undersigned is Appellant's legal representative in this Appeal. Illinois Tool Works Inc., the Assignee of the above-referenced application, as evidenced by the documents mentioned above, will be directly affected by the Board's decision in the pending appeal.

3. STATUS OF THE CLAIMS

Claims 1-26 are currently pending, and claims 1-26 are currently under final rejection and, thus, are the subject of this appeal.

4. STATUS OF AMENDMENTS

The Appellant has not submitted any amendments subsequent to the Office Action mailed on May 26, 2004 in which the rejection of claims 1-26 was made final.

5. SUMMARY OF CLAIMED SUBJECT MATTER

An apparatus (10) to reposition a temperature indicator stick (12) is disclosed and includes a housing (14) having an outer surface (13) and an inner chamber (15) to receive a temperature indicator stick (12) therein. *See: Application, ¶[0009], Ins. 1-3.* The apparatus (10) also includes an advancement mechanism (16) positioned about the outer surface (13) of the housing (14) and capable of contact with a temperature indicator stick (12) positioned in the chamber (15) of the housing (14) to advance the temperature indicator stick (12) with motion applied to the advancement mechanism (16). *Id., Ins. 4-7.*

The present invention is also directed to a temperature indicator stick extension and retraction apparatus (10) having means for aligning (14, 15, 32, or 44) a temperature indicator stick (12) to permit axial movement (24) and means for controlling axial movement (16, 20, 32, 34, 36, 44, or 46) of the temperature indicator stick (12) to extend and retract the temperature indicator stick. *See: Application, ¶[0010], Ins. 1-5.*

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Alternately, the temperature indicator stick includes a means for accumulating residue (16, 36, 44, or 50) upon axial movement of the temperature indicator stick (14). See: Application, ¶[0026], lns. 2-12. The means for accumulating residue (16, 36, 44, or 50) may include forming a temperature indicator stick (12) in a non-circular shape (Fig. 4, 12) to have a volume of space in the means for controlling movement (16, 32, or 36) of the temperature indicator stick (12). Id.

The means for controlling movement (16, 20, 32, 34, 36, 44, or 46) of the temperature indicator stick (12) may have a rotatable collet (16) having a threaded portion configured to engage the temperature indicator stick (12). See: Application, ¶[0006], lns. 4-5.

According to another aspect of the present invention, an apparatus (10) to extend and retract a temperature indicator stick includes a housing (14) having at least one annular ring (34) at one end and adapted to receive within the housing (14) a temperature indicator stick (12). The apparatus (10) also has a resistance mechanism (32) secured to the housing (14) to oppose rotational movement of the temperature indicator stick (12) and a collet (16) having threads (36) and rotatably coupled to the at least one annular ring (34) of the housing (14). See: Application, ¶[0011], lns. 1-8. The collet (16) is further configured to engage the temperature indicator stick (12) upon rotation of the collet (16) about the housing (14). Id.

In accordance with a further aspect of the present invention, an apparatus (10) to reposition a temperature indicator stick (12) includes a housing (14) having an inner chamber (15) directed along a generally longitudinal axis (39) to receive a temperature indicator stick (12) therein and a transducer (16) which is mounted to the housing (14) and rotatable about the generally longitudinal axis (39). The transducer (16) engages the temperature indicator stick (12) to convert such rotatable motion (22) to linear repositioning of the temperature indicator stick (12) along the generally longitudinal axis (39). See: Application, ¶[0030], lns. 1-7..

According to yet another aspect of the present invention, a kit to reposition a temperature indicator stick (12) includes a housing (14) having an inner chamber (15) to receive a first indicator stick (12), the first indicator stick (12) being shortened in normal

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use and an advancement mechanism (16) proximate to the housing (14). The advancement mechanism (16) is capable of contact with the first temperature indicator stick (12) positioned in the inner chamber (15) of the housing (14) to advance the first temperature indicator stick (12) with motion applied to the advancement mechanism (16). The kit also has a second indicator stick which may replace the first indicator stick (12) in the interior chamber (15). See: Application, ¶[0031], lns. 1-8.

In still a further aspect of the present invention, an apparatus (10) to reposition a temperature indicator stick (12) includes a housing (14) having an inner chamber (15) to receive a temperature indicator stick (12) therein and means for advancing (16, 20, 32, 34, 36, 44, or 46) the temperature indicator stick (12) by a rotating motion (22) about the housing (14). See: Application, ¶[0032], lns. 1-4.

6. **GROUNDS OF REJECTION:**

The Examiner has rejected claims 1-26 as anticipated under 35 U.S.C. §102(b) by Fox (USP 4,875,782) hereinafter Fox. Appellant contests the Examiner's only ground of rejection. The claims of the groups do not stand or fall together.

7. **ARGUMENT:**

REJECTION UNDER 35 U.S.C. §102(b) BY FOX:

CLAIMS 1-26:

As discussed in detail below, the Examiner has improperly rejected the pending claims. The Examiner has misapplied long-standing and binding legal precedents and principles in rejecting the claims under §102(b) of Title 35 of the United States Code. Accordingly, Appellant respectfully requests full and favorable consideration by the Board as Appellant believes that claims 1-26 are currently in condition for allowance.

The Examiner finally rejected claims 1-26 as anticipated under 35 U.S.C. §102(b) by Fox. The Examiner contends that Fox teaches the apparatus to reposition a temperature indicator stick of the present invention. Appellant respectfully disagrees.

To anticipate a claim, the reference must teach each and every element of the claim. See: MPEP §2131. Appellant believes there are numerous distinctions between the current invention and the art cited by the Examiner, including the fact that Fox does not form an apparatus to reposition a temperature indicator stick. Fox includes a

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temperature probe that is insertable into a viscous material flow. See Abstract. As Fox discloses, "temperature probe 26, preferably a thermocouple, ... includes ... an electrical connector housing 34 wherein one end of electrical connector wire 36 is connected to temperature probe 26" and "the other end of electrical connector wire 36 [see Fig. 3] is connected to remote control and indicator 50." Fox; col. 3, lns. 29-46. That is, the reference itself discloses a generally fixed position temperature indicator electrically connected to the translatable temperature probe or thermocouple. One of ordinary skill in the art will readily recognize that a thermocouple electrically connected to monitor is not the same as, or equivalent to, an apparatus for repositioning a temperature indicator stick as presently claimed.

As previously argued in the January 6, 2004 Response: In accordance with MPEP §2111, during patent examination, the pending claims must be given their broadest reasonable interpretation consistent with the specification. MPEP §2111 further states that "the broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach." Initially, Appellant believes that a person of ordinary skill in the art would not interpret a temperature indicator stick as claimed to be the same as the temperature probe apparatus of Fox. Specifically, as stated in the present Specification -- and directed to known temperature detection devices and methods -- "Some devices use gauges or electronic components having thermistors, whereas others use chemical compounds formed as temperature indicator sticks that feed through mechanical temperature indicators." Application, ¶[0021], lns. 2-3. That is, a person of ordinary skill in the art would readily recognize that a temperature indicator stick, as used in the claims and the specification, is a chemical compound that is constructed to change phase at a predetermined temperature thereby indicating a temperature. Such a "stick" is known in the art, and that known status cannot be ignored. As such, those claims that recite specific structure encompassing, surrounding and/or to work with a temperature indicator stick are patentably distinct over the temperature probe apparatus of Fox at least because there is no such temperature indicator stick disclosed therein. See: January 6, 2004 Response; pg. 7, ¶3.

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Throughout prosecution of the present application, in addition to other distinctions, Appellant has argued that the temperature probe of Fox cannot be equivalently considered a temperature indicator stick as presently claimed. One skilled in the art will readily appreciate that a thermocouple must be connected to another device, e.g., a monitor, in order to indicate any temperature. Notwithstanding, the Examiner has, contrary to its plain meaning and as further defined in the Specification, determined a "temperature probe" to be within the definition that one skilled in the art would render to "a temperature indicator stick."

Responsive the argument cited above, the Examiner stated that:

Applicant's arguments filed 1/4/2004 have been fully considered but they are not persuasive. The Applicant argues more than what is being claimed, and is trying to read more limitations into the claims than what is actually claimed. Applicant argues that the temperature indicator stick is different than that shown by Fox, and one of ordinary skill in the art would know the difference. The examiner disagrees with this point of view, the claims are read in their broadest interpretation and in that view Fox meets all the claimed limitation as described above. The Applicant does not claim how the indicator stick works to differentiate it from the prior art of record, as it stands the temperature indicator stick, as claimed, is only a name of an item and does not give extra breath [sic] and meaning to the claims.

May 26, 2004 Office Action; pg. 6, ¶3.

The Examiner's truncated version of claim interpretation is clearly improper. As stated in MPEP §904.01, "[t]he breadth of the claims in the application should always be carefully noted; that is, the examiner should be fully aware of what the claims do *not* call for, as well as what they do require. During patent examination, the claims are given the broadest reasonable interpretation consistent with the specification." MPEP §904.01. Furthermore, MPEP §2111 states that "reading a claim in light of the specification, to thereby interpret limitations explicitly recited in the claim, is a quite different thing from 'reading limitations of the specification into a claim'" MPEP §2111, discussing *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

MPEP §2111.01 further states that "[d]uring examination, the claims must be interpreted as broadly as their terms reasonably allow" and that "[t]his means that the words of the claim must be given their plain meaning unless applicant has provided a

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clear definition in the specification." MPEP §2111.01 (emphasis added). Even further, "[c]laims are not to be read in a vacuum, and limitations therein are to be interpreted in light of the specification in giving them their 'broadest reasonable interpretation'." MPEP §2111.01, (quoting *In re Okuzawa*, 537 F.2d 545, 548, 190 USPQ 464, 466 (CCPA 1976)) (emphasis in original). It is clearly apparent that the claims are to be given their broadest reasonable interpretation consistent with the specification and not merely "read in their broadest interpretation" as has been done by the Examiner in this case.

The specification clearly defines a temperature indicator stick and further differentiates a temperature indicator stick from an electronic device configured to sense and measure temperature via a probe. The Specification states, discussing the development of a temperature indicator stick, that:

Initially, temperature sensing was conducted by sprinkling a few granules of a known compound on an object. When the granules melted, the desired temperature was achieved. Later, pellets were introduced to make marks similar to a chalk mark on a surface of the object rather than observing the entire pellet melt. Further improvements led from a pellet to a chalk stick, which is protected in a housing that includes an adjustable holder for positioning the temperature indicator stick relative to the housing.

Application: ¶[0003]. (emphasis added).

The Specification further states that:

Several detection devices and methods exist to determine surface and operating temperatures. Some devices use gauges or electronic components having thermistors, whereas others use chemical compounds formed as temperature indicator sticks that feed through mechanical temperature indicators. Although each of these detection device has advantages, temperature indicators have been found to be particularly useful due to their ease of use and inexpensive cost.

Application: ¶[0021]. (emphasis added).

Contrary to that described above, the Examiner states that "as it stands the temperature indicator stick, as claimed, is only a name of an item and does not give extra breath [sic] and meaning to the claims." May 26, 2004 Office Action; pg. 6, ¶3. Appellant concedes that the English language is not always the most concise means to describe a structure; however, since words are what we have, one cannot dismiss the

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words of a claim as merely perfunctory "a name of an item." The names of items in claims cannot be read in a vacuum. As previously cited, the Specification clearly defines a temperature indicator stick as a stick formed from a compound configured to melt at a desired temperature. Even without this explicit definition, a person of ordinary skill in the art would understand as much. Taken together with the specification, the Examiner's interpretation that a temperature indicator stick is "only a name of an item" and given no patentable weight is clearly improper.

Appellant will now address, individually, each claim that contains additional subject matter beyond that addressed above. The subject matter of which is believed to further patentably distinguish the present claims over Fox.

CLAIM 1:

Claim 1 calls for a housing having an outer surface and an inner chamber to receive a temperature indicator stick therein. As previously argued and as disclosed in the Specification, a person of ordinary skill in the art would readily appreciate the distinction between the thermocouple of Fox and the temperature indicator stick as presently claimed. Additionally, Fox states such an understanding. Fox, referring to Fig. 3, states that:

[I]t should be appreciated that motor 12, potentiometer 16 and temperature probe 26 are electrically connected to remote control and indicator 50. Remote control and indicator 50 most suitably comprises a control panel having a temperature indicator 50A, a position indicator 50B, and a switch 50C for actuating temperature probe 26 so as to (1) extend outwardly, (2) to withdraw inwardly, and (3) to deactivate temperature probe 26. Both temperature and corresponding position relating to movement of temperature probe 26 within a viscous material flow are simultaneously indicated on temperature indicator 50A and position indicator 50B as temperature probe 26 is driven into and withdrawn from a viscous material flow.

Fox; col. 3, ln. 64 through col. 4, ln. 10 (emphasis added).

That is, Fox states that it is not the temperature probe 26 that indicates any temperature but the separate indicator 50A attached thereto. The Examiner has disregarded that which is expressly taught in Fox in interpreting the temperature probe 26 of Fox as a temperature indicator as claimed.

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Claim 1 further calls for an advancement mechanism positioned about the outer surface of the housing and capable of contact with a temperature indicator stick positioned in the chamber of the housing to advance the temperature indicator stick with motion applied to the advancement mechanism. The Examiner states that advancement mechanism 22 is positioned about the outer surface of the housing (lower portion of 10). May 26, 2004 Office Action; pg. 2, ¶2. Such is not the case. As shown in Fig. 1 of Fox, it is apparent that driven gear 22 is mounted within the perimeter of apparatus 10. Additionally, with reference to Fig. 1, Fox states that “[d]river gear 14 meshes with driven gear 22 which is rotatably mounted in the housing of automated temperature probe 10 by bearings 24.” Fox; col. 3, lns. 26-28 (emphasis added). Fox expressly states that the driven gear 22, apparently interpreted by the Examiner as the advancement mechanism of claim 1, is mounted in the housing of the temperature probe. As such, the driven gear is not shown or disclosed as being positioned about the outer surface of the housing as called for in claim 1.

Claim 1 further defines the advancement mechanism as capable of contact with a temperature indicator stick. That is, there is no intermediary part between the advancement mechanism and the temperature indicator stick. As clearly shown in Fig. 2 of Fox, a connector wire (36) electrically connects temperature probe 26 to a remote control and indicator 50. See: Fox; col. 3, lns. 40-46 (emphasis added). Referring to Fig. 1 of Fox, a non-rotating screw 30 is disposed between temperature probe 26, having connector wire 36, and driven gear 22. It is therefore apparent that the advancement mechanism -- driven gear 22 -- is not capable of contact with the temperature indicator stick -- temperature probe 26 -- as called for in claim 1.

For all the reasons stated above, Appellant believes claim 1 is clearly patentable over Fox. Appellant believes claims 2-9 are in condition for allowance at least pursuant to the chain of dependency. However, since Appellant believes claims 7, 8, and 9 include subject matter that is additionally distinguishable from the art of record, Appellant will specifically address that which is patentably distinct above and beyond the allowability of the claims pursuant to the chain of dependency.

CLAIM 7:

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Claim 6, from which claim 7 depends, calls for the advancement mechanism to have one or more threads. Claim 7 further defines the housing as having a tapered end to align the temperature indicator stick with the one or more threads of the advancement mechanism. In rejecting claim 7 the Examiner states that "the housing (lower portion of 10) has a tapered end to align the temperature indicator stick with the one or more threads. (the narrowed and wider parts of the chamber)". May 26, 2004 Office Action; pg. 3, ¶3.

The tapered end 18 of the housing, as shown in Fig. 3 (reproduced at right), becomes gradually thinner, narrower, or smaller toward one end. As defined in Webster's II New Riverside University Dictionary, a "taper" is generally defined as "to become gradually thinner or narrower toward one end", "to become gradually smaller or less", "to diminish or make smaller gradually", and "gradually decreasing in size toward a point".

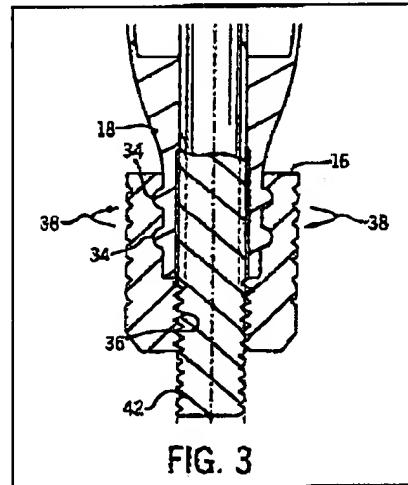
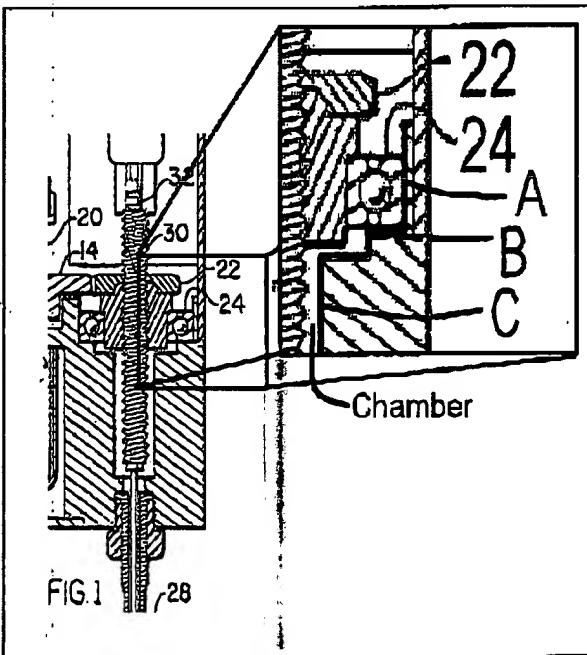


FIG. 3



"narrower and wider parts of the chamber," labeled A-C, are incremental steps – none of which are tapered.

Webster's II

New Riverside University Dictionary 1184 (1994). As defined, a taper is a gradual reduction in size.

Contrary to the claimed tapered end of the housing of the present invention, it is apparent that the 'housing' of Fox, as interpreted by the Examiner, does not include a tapered end but has a stepped opening formed therein. From the exploded view of Fig. 1 of Fox (shown at left), what the Examiner refers to as the

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Additionally, the chamber is stepped to receive bearing 24 therein for rotatably supporting the driven gear 22. A stepped opening is not a tapered end in as much as (1) it is not an "end" of the housing and (2) the chamber formed through the housing has a plurality of generally uniform sections with steps or ledges formed therebetween. As such, the chamber formed through the "housing" of Fox is neither tapered nor an end as called for in claim 7. As such, Appellant believes claim 7 is patentable over that which is shown in Fox.

CLAIM 8:

Claim 8 further defines that the advancement mechanism is rotatably fixed to the housing. In rejecting claim 8, the Examiner simply states "[r]egarding claim 8, wherein the advancement mechanism 12 is rotatably fixed to the housing." May 6, 2004 Office Action; pg. 3, ¶4. The Examiner has disregarded the teaching of Fox which clearly shows a bearing 24 mounted between the driven gear 22 and mounting block 18. Fox states that "[d]river gear 14 meshes with driven gear 22 which is rotatably mounted in the housing of automated temperature probe 10 by bearings 24." Fox; col. 3, lns. 26-28 (emphasis added). Applicant does not disagree that driven gear 22 is rotatable relative to the housing, however, that is not what is called for in claim 8. Claim 8 calls for the advancement mechanism to be rotatably fixed to the housing. A person of ordinary skill in the art would readily recognize that an outer race of bearing 24 is fixably connected to the housing and includes an inner race rotatable relative thereto. That is, bearing 24 is included to allow rotation of the driven gear 22 relative to the housing. As such, it is not the driven gear of Fox that is fixed to the housing but the bearing that is mounted therebetween. Therefore, an advancement mechanism rotatably fixed to a housing, as called for in claim 8, is not shown or disclosed in Fox. Accordingly, Appellant believes claim 8 is patentably distinct over that which is shown in Fox.

CLAIM 9:

Claim 9 further defines the advancement mechanism of claim 1 as a collet having threads. The Examiner rejected claim 9 stating that "wherein the advancement mechanism 22 is a collet having threads." Appellant does not disagree that driven gear 22 is a gear, however a gear is not a collet. Webster's II New Riverside University

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Dictionary defines a "collet" as a "cone-shaped sleeve ... for holding circular or rodlike pieces." Webster's II New Riverside University Dictionary 281 (1984); see also The American Heritage Dictionary 292 (2nd ed. 1985) (courtesy copy provided in the January 6, 2004 Response). As shown in the detail of Fig. 1 of Fox provided above, the driven gear 22 has two distinct outer surfaces with a step formed therebetween. The first surface of driven gear 22 is constructed to engage driver gear 14 and the second surface of driven gear 22 is constructed to be received in bearing 24. There is a distinct step formed between the first surface and the second surface of driven gear 22. As such, the driven gear 22 is not cone shaped as a collet is generally defined and as called for in claim 9. At least for the reasons provided above, Appellant believes claim 9 is patentable over Fox.

CLAIM 10:

The Examiner rejected claim 10 under 35 U.S.C. §102(b) over Fox stating that "a temperature indicator stick extension and retraction apparatus comprising: means for aligning a temperature indicator stick 26 to permit axial movement; and means 22 for controlling axial movement of the temperature indicator stick to extend and retract the temperature indicator stick." May 26, 2004 Office Action; pg. 3, ¶6. In accordance with the arguments offered above, Appellant believes a person of ordinary skill in the art would not interpret the temperature probe 26 of Fox as a temperature indicator stick as defined in the Specification and as known to those skilled in the art. As such, Appellant believes claim 10 is patentable over Fox. Accordingly, Appellant believes claims 11-17 are in condition for allowance at least pursuant to the chain of dependency. However, since Appellant believes claims 13, 14, and 15 include subject matter that is additionally distinguishable from the art of record, Appellant will specifically address that which is patentably distinct above and beyond the allowability of the claims pursuant to the chain of dependency.

CLAIM 13:

Claim 13 further defines the temperature indicator stick extension and retraction apparatus of claim 10 as further comprising "means for accumulating residue of the temperature indicator stick upon axial movement of the temperature indicator stick." The Examiner rejected claim 13 stating that "[r]egarding claim 13, further comprising a

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means for accumulating residue of the temperature indicator stick upon axial movement of the temperature indicator stick. (threads engaging the threads on the stick)." May 26, 2004 Office Action; pg. 3, ¶9.

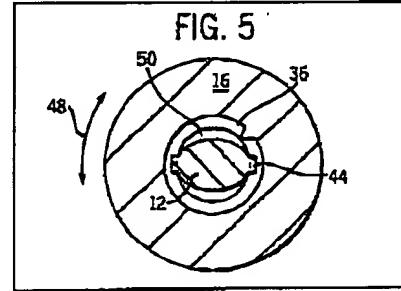
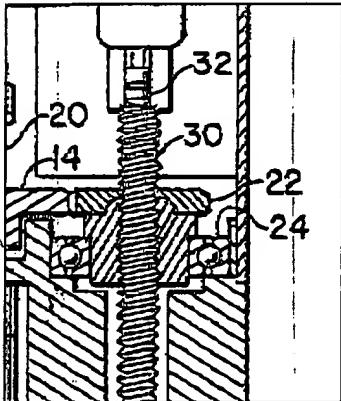
In discussing Fig. 5 (reproduced at right), the present Specification states that "[r]otation of the collet 16 in the direction of arrows 48 causes the collet threads 36 to

engage the ridge 44 of the temperature indicator stick" and that "[d]uring the threading process, residue of the temperature indicator stick 12 is removed and deposited into a volume of space or air pocket 50." Application, ¶[0026]. There is no disclosure in Fox for the driven gear 22 to remove material from the non-rotating screw 30. In fact, such an interpretation, that the driven gear

removes material from the non-rotating screw, would render the device of Fox inoperable. Specifically, such a process would strip the threading from either the non-rotating screw 30 or the interior surface of driven gear 22 and would result in either binding therebetween or the driven gear rotating without translation of non-rotating screw 30. Accordingly, there is no disclosure within the four corners of Fox for accumulating residue of a temperature indicator stick as called for in claim 13. Therefore, Appellant believes that which is called for in claim 13 is patentable over Fox.

CLAIM 14:

Claim 14 further defines the means for accumulating residue of claim 13 as forming the temperature indicator stick in a non-circular shape to have a volume of space in the means for controlling movement of the temperature indicator stick. The Examiner rejected claim 14 stating that "[r]egarding claim 14, wherein the means (upper part of the chamber) for accumulating residue comprises forming the temperature indicator stick in a non-circular shape to have a volume of space in the means for controlling movement of the temperature indicator stick." May 26, 2004 Office Action; pg. 4, ¶1. The Examiner has merely reproduced claim 14 with no application of that which is called for therein to



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that which is shown in Fox or the previous interpretation thereof. As clearly shown in Fig. 1 of Fox (reproduced above), the "temperature indicator stick" disclosed therein has a circular shaped cross-section. As shown in Fig. 5 of the present application (as shown above), temperature indicator stick 12 includes a pair of ridges 44 extending therefrom. The cross-section of the temperature indicator stick is clearly non-circular. A cross-section of any portion of the "temperature indicator stick" of Fox yields a circular cross section. Furthermore, there is no disclosure in Fox that a space is formed for the collection of temperature indicator stick residue in the means for controlling movement of the temperature indicator stick. Specifically, Fox does not disclose a space or volume being maintained between driven gear 22 and non-rotating screw 30. As such, Appellant believes that which is called for in claim 14 is patentable over Fox.

CLAIM 15:

Claim 15 calls for, in part, wherein the means for controlling movement of the temperature indicator stick includes a rotatable collet having a threaded portion configured to engage the temperature indicator stick. As previously argued with respect to claim 9, driven gear 22 is clearly not a collet. Accordingly, Appellant believes claim 15 is patentable over Fox in as much as driven gear 22 of Fox is clearly not a collet.

CLAIM 18:

The Examiner next rejected claim 18 under 35 U.S.C. §102(b) as being anticipated by Fox stating that Fox shows:

An apparatus to extend and retract a temperature indicator stick, the apparatus comprising: a housing (lower portion of 10) having at least one annular ring at one end 14 and adapted to receive within the housing a temperature indicator stick 26; a resistance mechanism (lower portion of 22) secured to the housing to oppose rotational movement of the temperature indication stick 26; and a collet 22 having threads and rotatably coupled to the at least one annular ring of the housing, the collet 22 configured to engage the temperature indicator stick 26 upon rotation of the collet about the housing. (the housing is only view as the lower half).

May 26, 2004 Office Action: pg. 4, ¶5.

Even assuming arguendo that the temperature probe is a temperature indicator stick (which it is not), the housing (lower portion of 10) does not have an annular ring at one end (14). Fox states that "[d]river gear 14 meshes with driven gear 22 which is

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rotatably mounted in the housing of automated temperature probe 10 by bearings 24." Fox; col. 3, lns. 26-28. Bearings 24 are inserted into a recess of housing (lower portion of 10); however, a recess is not an annular ring as called for in claim 18. Additionally, driven gear 22 is not secured to the housing nor is it constructed to oppose rotational movement of the temperature probe 26. As is commonly known in the art, a bearing is implemented to facilitate rotation between related elements. Similarly a person of ordinary skill in the art would readily recognize that driven gear 22 is not a collet. A collet is something that holds circular or rod-like pieces. See: Webster's II New Riverside University Dictionary 281 (1994); also January 6, 2004 Response, courtesy copy of The American Heritage Dictionary 292 (2nd ed. 1985).. As the reference states, element 22 is a gear. Further, the inner surface of driven gear 22 is threaded to screw 30, not temperature probe 26. Yet a further distinction, claim 18 calls for, in part, that the collet is configured to engage the temperature indicator stick upon rotation of the collet about the housing. Appellant does not disagree that driven gear 22 is capable of rotation relative to a housing (lower portion of 10), but being rotatable relative thereto is not rotatable thereabout. As such, for at least the reasons set forth heretofore, claim 18, and those claims that depend therefrom, are patentable over the art of record. January 6, 2004 Response; pg. 9, ¶2.

Responding thereto, the Examiner states that "[t]he term 'thereabout' is also a relative term and it depends on the point of reference, there are point [sic] on the housing that would have a reference of the gear rotatable thereabout meeting the claimed limitation." May 26, 2004 Office Action; pg. 7, ¶2. Appellant respectfully disagrees.

The Examiner's interpretation of driven gear 22 as the collet of claim 18 prevents such an interpretation. That is, as shown in the figures of Fox produced above, driven gear 22 is received in an opening formed in the 'housing'. Claim 18 calls for a housing having at least one annular ring at one end. Claim 18 calls for an annular ring, not an opening, recess, or channel as shown in Fox. Additionally the ring is located at one end of the housing. Claim 18 further calls for a collet rotatably coupled to the at least one annular ring of the housing and configured to engage the temperature indicator stick upon rotation of the collet about the end. Such a construction allows the collet to rotate about,

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or around, the housing. Appellant does not disagree that the term "thereabout" is a relative term that depends on the point of reference, however, claim 18 clearly defines the points of reference as the position of the collet relative to the housing. It is clearly apparent that driven gear 22 of Fox rotates relative to the 'housing', in the housing, and not "about" the housing as called for in claim 18. Because driven gear 22 is received in the channel formed in the 'housing' and is seated in bearing 24, it is prevented from rotating about the housing.

Additionally, the Examiner has failed to address the other distinctions between claim 18 and that which is shown in Fox, as raised by Appellant in the January 6, 2004 Response. That is, driver gear 14 of Fox is not an annular ring formed about one end of the "housing" as called for in claim 18. It is equally apparent, as argued above, that the temperature probe 26 of Fox is not a temperature indicator stick as called for in claim 18.

As such, Appellant believes that which is called for in claim 18 is not shown in or suggested by Fox. Accordingly, Appellant believes claims 19-24 are in condition for allowance at least pursuant to the chain of dependency. However, since Appellant believes claims 19, 20, and 23 include subject matter that is additionally distinguishable from the art of record, Appellant will specifically address that which is patentably distinct above and beyond the allowability of the claims pursuant to the chain of dependency.

CLAIM 19:

Claim 19 further defines the apparatus of claim 18 wherein a pair of annular rings couple the collet to the housing. The examiner rejected claim 19 stating that "wherein a pair of annular rings 14 couples the collet 22 to the housing." May 26, 2004 Office Action; pg. 4, ¶6. Such an assertion is not supported by the reference. Fox states that "[d]river gear 14 meshes with driven gear 22 which is rotatably mounted in the housing of automated temperature probe 10 by bearings 24." Fox; col. 3, lns. 26-28. As shown in Fig. 1 of Fox, only one such driver gear 14 is provided. Additionally it would be redundant to provide duplicative driver gears for a driven gear. Additionally, Fox discloses that bearings 24 mount driven gear 22 to automatic temperature probe 10, and not a pair of annular rings of the housing, as called for in claim 19. As such, that which is called for in claim 19 is clearly not shown in Fox.

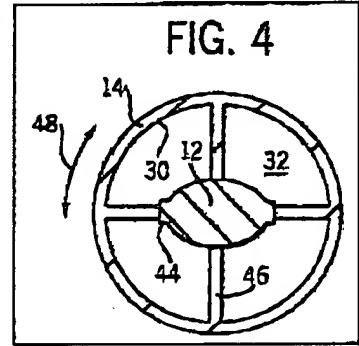
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CLAIM 20:

Claim 20 further defines claim 18 wherein the resistance mechanism includes a series of flanges connected to an interior of the housing. As shown in Fig. 4 (shown at right), the Specification states that “[t]he temperature indicator stick 12 is aligned with each of the flanges 32 along axis 39, and has a generally oval shape.”

See Application; ¶[0025]. In rejecting claim 20, the Examiner states that “wherein the resistance mechanism includes a series of flanges connected to an interior of the housing. (lower portion of 22 has multiple flanges)” May 26, 2004 Office Action; pg. 5, ¶12. The Examiner has provided no basis for the conclusion that lower portion of 22 has multiple flanges. Additionally, even assuming arguendo that lower portion of driven gear 22 includes multiple flanges, because driven gear 22 is rotatable relative to the “housing” of Fox, any flanges of driven gear 22 are not connected to an interior of the housing, as called for in claim 20. Such a construction would prevent rotation therebetween thereby preventing extension or retraction of temperature probe 26. Accordingly, that which is called for in claim 20 is not shown or disclosed in Fox. As such, Appellant believes that which is called for in claim 20 is patentably distinct over Fox.

**CLAIM 23:**

The Examiner rejected claim 23 stating that the “the temperature indicator stick is ovaly shaped.” May 26, 2004 Office Action; pg. 5, ¶4. As previously argued with respect to claim 14, the Examiner has provided no support for such a conclusion. Additionally, there is no support in Fox for such a conclusion. It is apparent that the temperature probe 22 and the non-rotating screw 30 of Fox are circular. Any other orientation would result in the non-rotating screw 30 binding in driven gear 22 upon any attempted rotation thereof. As such, that which is called for in claim 23 is not shown in or suggested by Fox. Therefore, Appellant believes that which is called for in claim 23 is patentably distinct over Fox.

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CLAIM 24:

The Examiner rejected claim 24 under 35 U.S.C. §102(b) as being anticipated by Fox stating that Fox shows an apparatus to reposition a temperature indicator stick. As previously argued, it is implausible that a person of ordinary skill in the art would consider a temperature probe incorporating a thermocouple, as shown in Fox, as a temperature indicator stick, as described in the Specification. A temperature indicator stick is a term of art commonly used in the metal working trades and is indicative of a material constructed to not only measure temperature, but indicate temperature as well. As such, that which is called for in claims 24 is patentably distinct over the art of record inasmuch as the claim recites, in part, a structure having a temperature indicator stick.

CLAIM 25:

With respect to claim 25, the Examiner rejected claim 25 stating that the first indicator stick of Fox is shortened during normal use. October 6, 2003 Office Action; pg. 5, ¶6. In the January 6, 2004 Response, Appellant argued that:

Applicant does not disagree that temperature probe of Fox is extended and retracted from the housing during normal use. Fox states that during operation "... temperature probe 26 is driven into and withdrawn from a viscous material flow." Col. 4, lns. 8-10. Such is not a shortening of the temperature probe during normal use. A temperature indicator stick is a consumable associated with metal working processes. The temperature indicator stick is consumed during normal use which results in shortening of the temperature indicator stick. As such, in addition to the arguments set forth above, claim 25 is patentably distinct over the art of record.

January 6, 2004 Response; pg. 10, ¶1.

Responsive thereto the Examiner states "[t]his is a functional limitation, and Fox only needs to be capable of performing this limitation, and if the material is hot enough, it will be consume the temperature indicator means of Fox." May 26, 2004 Office Action; pg. 7, ¶3. Appellant does not disagree that if a material is hot enough it would consume the temperature probe 26 of Fox, however, this is clearly not normal use of Fox and would destroy the Fox apparatus rendering it useless. Additionally, in order to consume the temperature indicator of Fox, would require inserting the entirety of automated temperature probe 10 with remote control and indicator 50, as shown in Fig. 3, into a molten material. The Examiner's interpretation is not only not reasonable, it is

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unreasonable. A person of ordinary skill in the art would readily appreciate that inserting the automatic temperature probe 10 of Fox, or even the apparatus of the present invention, into a molten material would destroy either device and pollute the material whose temperature is to be measured. The Examiner's interpretation of "shortened during normal use" further evidences the Examiner's disregard for interpreting the claims. The claims are not to be interpreted in a vacuum, but in light of the specification in giving them their 'broadest reasonable interpretation' as required under MPEP §2111.01.

Appellant acknowledges the inability to cite the following as precedent in a judicial court proceeding, but provides the following citation for the Board's consideration. MPEP §2111.01, in discussing a case related to claim interpretation, states that:

The claim related to an athletic shoe with cleats that "break away at a preselected level of force" and thus prevent injury to the wearer. The examiner rejected the claims over prior art teaching athletic shoes with cleats not intended to break off and rationalized that the cleats would break away given a high enough force. The court reversed the rejection stating that when interpreting a claim term which is ambiguous, such as "a preselected level of force," we must look to the specification for the meaning ascribed to that term by the inventor. The specification had defined "preselected level of force" as that level of force at which the breaking away will prevent injury to the wearer during athletic exertion. It should be noted that the limitation was part of a means plus function element.

MPEP §2111.01; discussing In re Weiss, 989 F.2d 1202, 26 USPQ2d 1885 (Fed. Cir. 1993).

Although the claim is not a means plus function element, the analysis is still applicable to the Examiner's interpretation of that which is called for in the present claims. The Specification describes the normal use of a temperature indicator stick as leaving a mark similar to a chalk mark on a surface of the object. See: Application; ¶[0003].

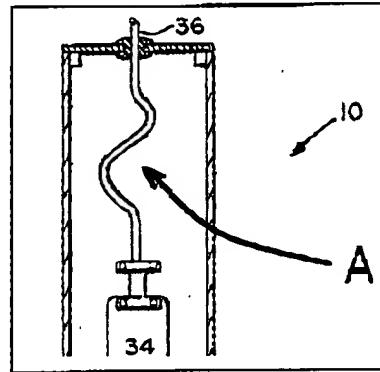
Claim 25 further calls for a second indicator stick which may replace the first indicator stick in the inner chamber. The Examiner states that Fox discloses "a second indicator stick 36 which may replace the first indicator stick in the inner chamber. (the 2nd stick 36 enters the chamber as the 1st stick leaves)." May 26, 2004 Office Action; pg. 5,

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¶6 to pg. 6, ¶1. Fox states that "temperature probe 26, preferably a thermocouple, ... includes ... an electrical connector housing 34 wherin one end of electrical connector wire 36 is connected to temperature probe 26" and "the other end of electrical connector wire 36 [see Fig. 3] is connected to remote control and indicator 50." Fox; col. 3, lns. 29-46. Not only has the Examiner interpreted a thermocouple as a temperature indicator stick but now interprets what Fox calls a "connector wire" as a second temperature indicator stick. Such an interpretation is incredible and clearly not supported by that which is disclosed in the reference.

Additionally, as shown in Fig. 1 of Fox (produced in part at right), it is apparent that slack, labeled for convenience as A, is maintained in connector wire 36 inside the housing of the apparatus to prevent wire 34 from repeatedly moving in and out of the housing as temperature probe 26 is translated therethrough. Accordingly, given a reasonable interpretation, normal use of the temperature probe of Fox does not shorten, or entirely consume, the automatic temperature probe 10 nor does the disclosure of Fox include a second indicator stick as called for in claim 25. As such, that which is called for in claim 25 is not shown or disclosed in Fox. Accordingly, Appellant believes claim 25 is patentably distinct over Fox.



CLAIM 26:

The Examiner rejected claim 26 under 35 U.S.C. §102(b) as being anticipated by Fox stating that Fox shows an apparatus to reposition a temperature indicator stick. See May 26, 2004 Office Action; pg. 6, ¶1. As previously argued, it is implausible that a person of ordinary skill in the art would consider a temperature probe incorporating a thermocouple, as shown in Fox, as a temperature indicator stick as called for in the present claims. Additionally, as previously argued with respect to claim 18, the driven gear 22 of Fox is clearly not rotated about the housing as called for in claim 26. As such, that which is called for in claim 26 is patentably distinct over the art of record inasmuch as the claim recites, in part, an apparatus constructed with at least one temperature indicator stick.

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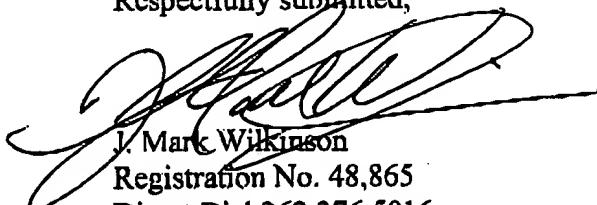
CONCLUSION

In view of the above remarks, Appellant respectfully submits that the Examiner has provided no supportable position or evidence that claims 1-26 are anticipated under 35 U.S.C. §102(b) by Fox. Accordingly, Appellant respectfully requests that the Board find claims 1-26 patentable over the prior art of record, direct withdrawal of all outstanding rejections and direct the present application be passed to issuance.

General Authorization for Extension of Time

In accordance with 37 C.F.R. §1.136, Appellant hereby provides a general authorization to treat this and any future reply requiring an extension of time as incorporating a request therefore. A Credit Card Authorization is included for the \$340.00 fee for filing this Appeal Brief Under 37 C.F.R. §1.17(c).

Respectfully submitted,



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Dated: February 11, 2005
Attorney Docket No.: ITW7510.005

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CLAIMS APPENDIX

1. (Original) An apparatus to reposition a temperature indicator stick, the apparatus comprising:

a housing having an outer surface and an inner chamber to receive a temperature indicator stick therein; and

an advancement mechanism positioned about the outer surface of the housing and capable of contact with a temperature indicator stick positioned in the chamber of the housing to advance the temperature indicator stick with motion applied to the advancement mechanism.

2. (Original) The apparatus of claim 1 further including a resistance mechanism configured to prevent rotation of the temperature indicator stick.

3. (Original) The apparatus of claim 1 wherein the advancement mechanism advances the temperature indicator stick one of into the housing and out of the housing.

4. (Original) The apparatus of claim 1 wherein rotatable motion applied to the advancement mechanism advances the temperature indicator stick.

5. (Original) The apparatus of claim 1 wherein the temperature indicator stick has at least one ridge configured to engage the advancement mechanism.

6. (Original) The apparatus of claim 1 wherein the advancement mechanism has one or more threads.

7. (Original) The apparatus of claim 6 wherein the housing has a tapered end to align the temperature indicator stick with the one or more threads.

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8. (Original) The apparatus of claim 1 wherein the advancement mechanism is rotatably fixed to the housing.

9. (Original) The apparatus of claim 1 wherein the advancement mechanism is a collet having threads.

10. (Original) A temperature indicator stick extension and retraction apparatus comprising:

means for aligning a temperature indicator stick to permit axial movement; and

means for controlling axial movement of the temperature indicator stick to extend and retract the temperature indicator stick.

11. (Original) The apparatus of claim 10 further comprising a means for preventing rotational movement of the temperature indicator stick during the axial movement.

12. (Original) The apparatus of claim 11 wherein the means for preventing rotational movement is a plurality of flanges configured to engage a ridge of the temperature indicator stick.

13. (Original) The apparatus of claim 10 further comprising a means for accumulating residue of the temperature indicator stick upon axial movement of the temperature indicator stick.

14. (Original) The apparatus of claim 13 wherein the means for accumulating residue comprises forming the temperature indicator stick in a non-circular shape to have a volume of space in the means for controlling movement of the temperature indicator stick.

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15. (Original) The apparatus of claim 10 wherein the means for controlling movement of the temperature indicator stick includes a rotatable collet having a threaded portion configured to engage the temperature indicator stick.

16. (Original) The apparatus of claim 15 wherein the means for controlling allows extension and retraction of the temperature indicator stick with a single motion.

17. (Original) The apparatus of claim 10 wherein the means for aligning a temperature indicator stick includes a housing having an outer surface and an inner chamber to receive a temperature indictor stick therein.

18. (Original) An apparatus to extend and retract a temperature indicator stick, the apparatus comprising:

a housing having at least one annular ring at one end and adapted to receive within the housing a temperature indicator stick;

a resistance mechanism secured to the housing to oppose rotational movement of the temperature indicator stick; and

a collet having threads and rotatably coupled to the at least one annular ring of the housing, the collet configured to engage the temperature indicator stick upon rotation of the collet about the housing.

19. (Original) The apparatus of claim 18 wherein a pair of annular rings couples the collet to the housing.

20. (Original) The apparatus of claim 18 wherein the resistance mechanism includes a series of flanges connected to an interior of the housing.

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21. (Original) The apparatus of claim 18 wherein the temperature indicator stick has at least one ridge configured to engage the threads upon rotation of the collet to cause one of extension and retraction of the temperature indicator stick from the housing.

22. (Original) The apparatus of claim 21 wherein the housing is contoured at one end to align the threads of the collet with the at least one ridge of the temperature indicator stick.

23. (Original) The apparatus of claim 18 wherein the temperature indicator stick is ovally shaped.

24. (Original) An apparatus to reposition a temperature indicator stick, the apparatus comprising:

a housing having an inner chamber directed along a generally longitudinal axis to receive a temperature indicator stick therein; and

a transducer which is mounted to the housing and rotatable about the generally longitudinal axis, the transducer engaging the temperature indicator stick to convert such rotatable motion to linear repositioning of the temperature indicator stick along the generally longitudinal axis.

25. (Original) A kit to reposition a temperature indicator stick, the kit comprising:

a housing having an inner chamber to receive a first indicator stick, the first indicator stick being shortened in normal use;

an advancement mechanism proximate to the housing and capable of contact with the first temperature indicator stick positioned in the inner chamber of the housing to advance the first temperature indicator stick with motion applied to the advancement mechanism; and

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a second indicator stick which may replace the first indicator stick in the inner chamber.

26. (Original) An apparatus to reposition a temperature indicator stick, the apparatus comprising:

a housing having an inner chamber to receive a temperature indicator stick therein; and

means for advancing the temperature indicator stick by a rotating motion about the housing.

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